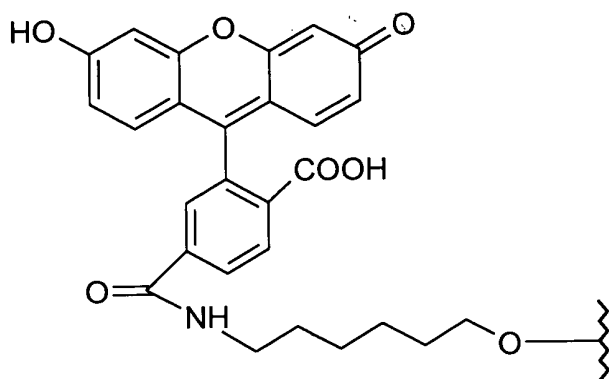
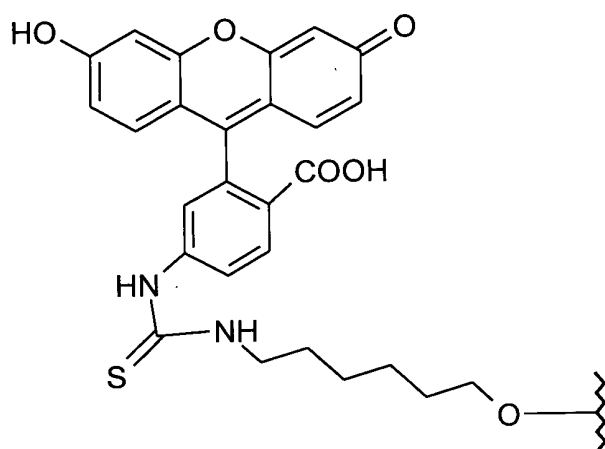


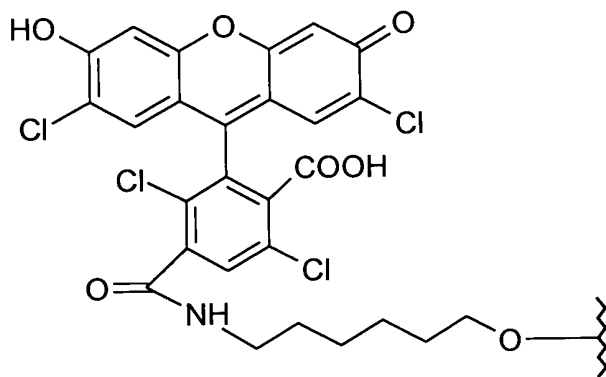
Fig. 1a:



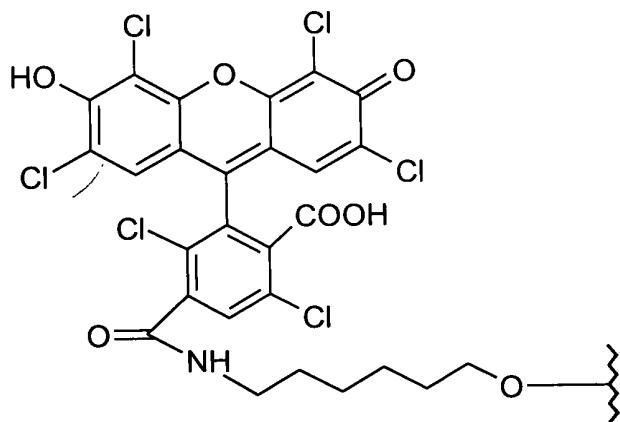
Fluorescein (Amide)



Fluorescein (Thiourea)



Tetrachlorofluorescein

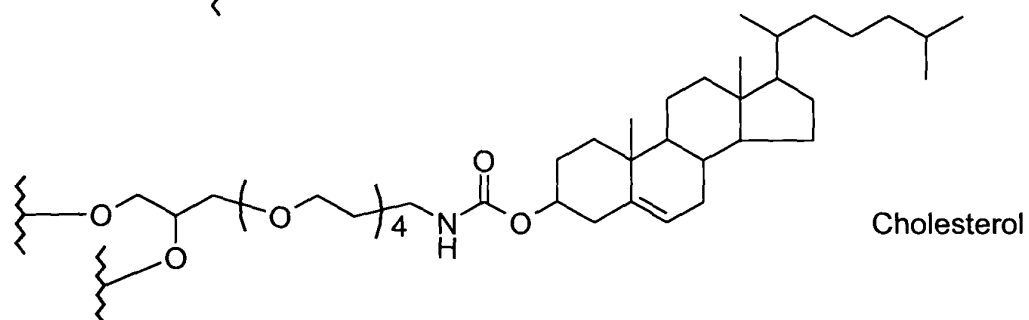
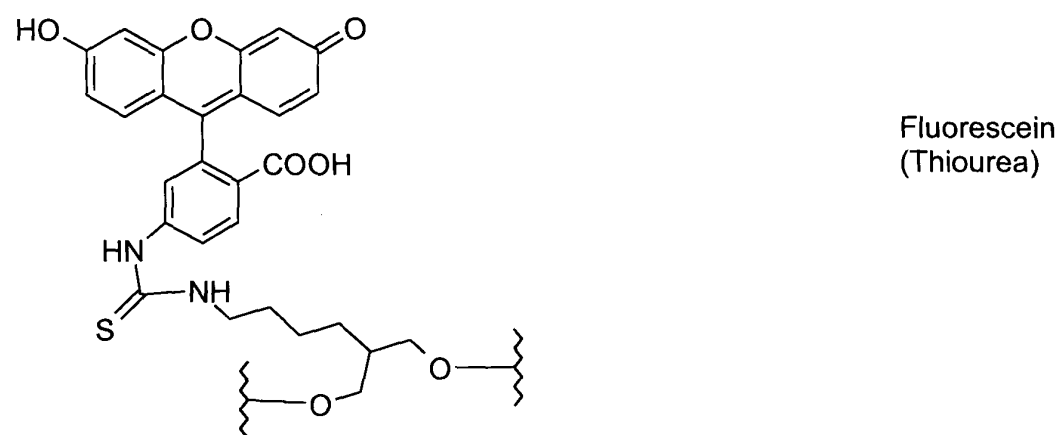
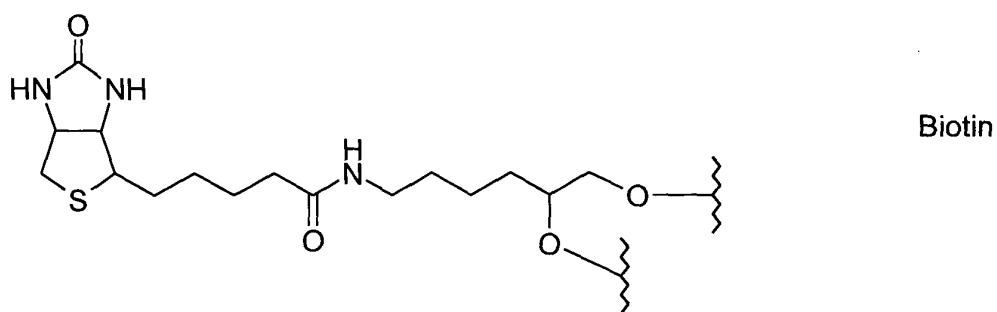
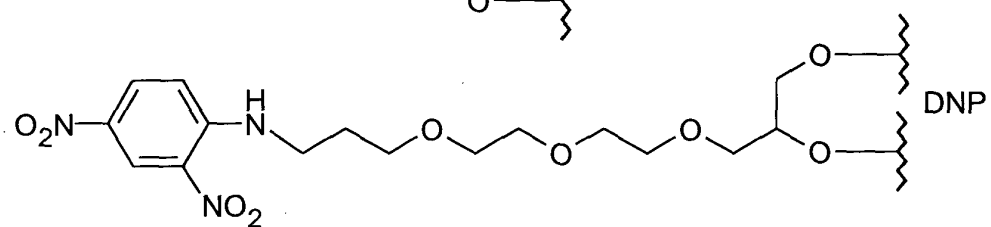
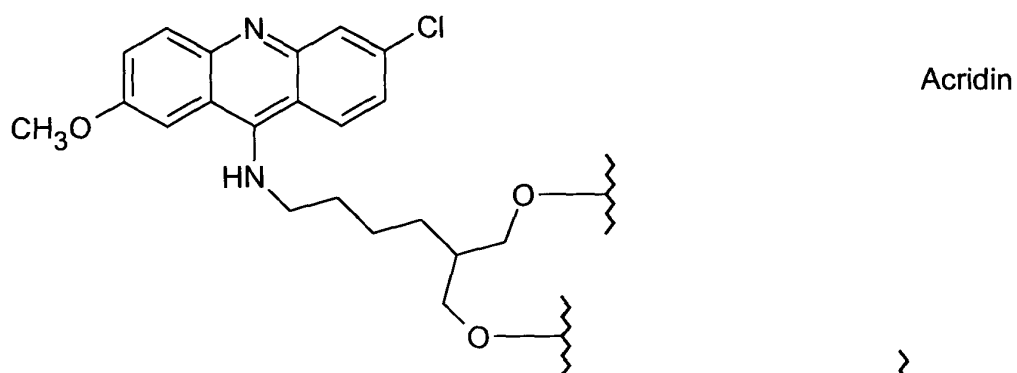


Hexachlorofluorescein

100-100-100-100

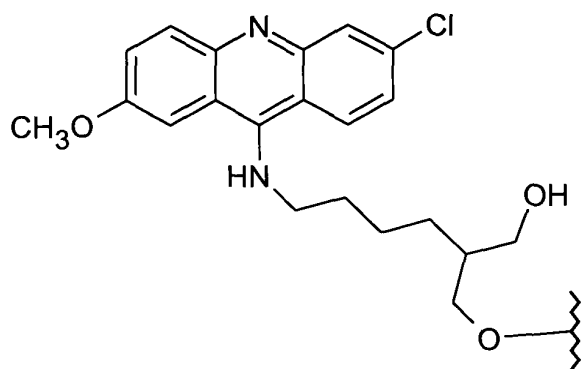


Fig. 2a:

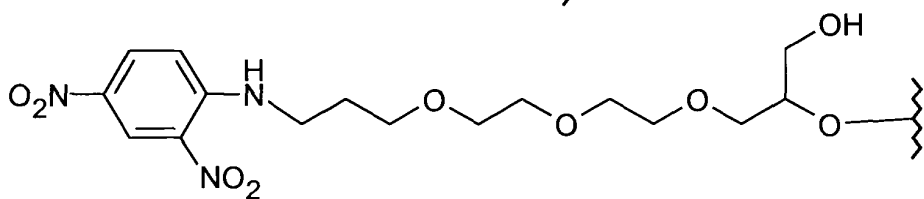


FOI 140-123860

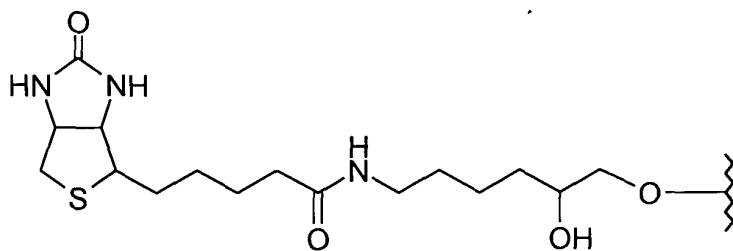
Fig. 2b:



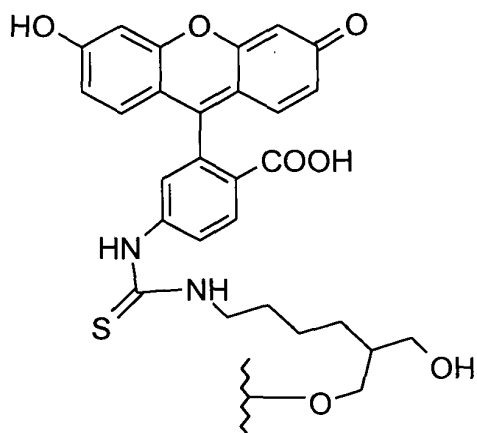
Acridin



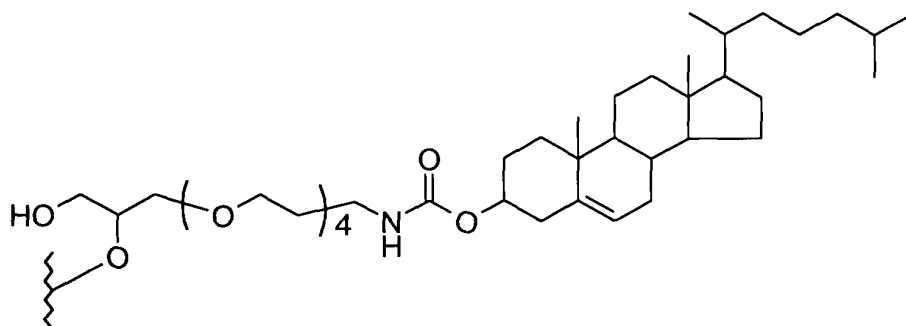
DNP



Biotin



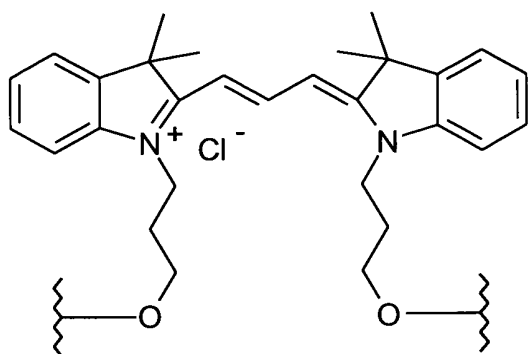
Fluorescein  
(Thiourea)



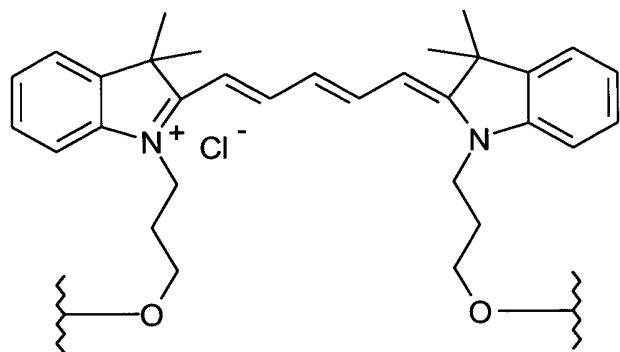
Cholesterol

Pub No. 7,269,860

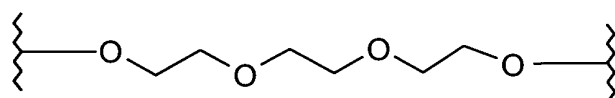
Fig. 3a:



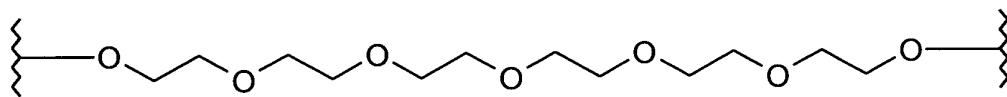
Cy3



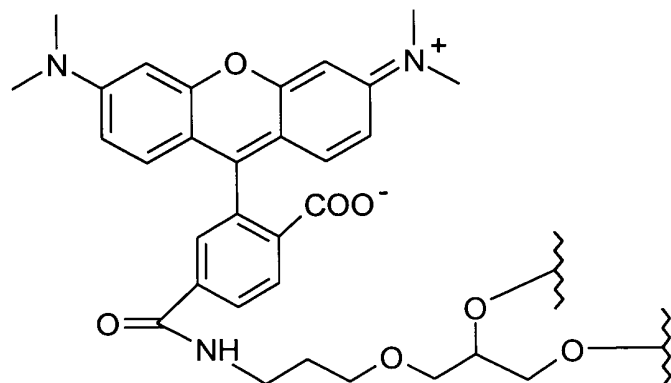
Cy5



Spacer-9



Spacer-18



TAMRA

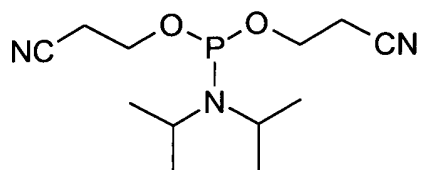
FIG. 3a

The chemical structure shows a bis-indole molecule. It consists of two indole rings connected by a polyene chain. The left indole ring has a trimethyl-substituted nitrogen atom with a positive charge (N<sup>+</sup>) and a hydroxyethyl group (-CH<sub>2</sub>CH<sub>2</sub>OH) attached to the 3-position. A chloride ion (Cl<sup>-</sup>) is shown as a counterion. The right indole ring also has a trimethyl-substituted nitrogen atom (N) and is connected to a polyene chain that extends to a wavy line, indicating a continuation of the chain or a specific functional group.

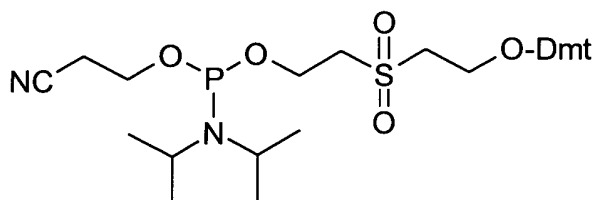
[illegible][illegible]CN(C)c1ccc2c(c1)oc3cc(ccc3c2)C(=O)c4ccc(cc4C(=O)NCCCCOCC(O)COCCO\*)C(=O)[O-]

TAMRA

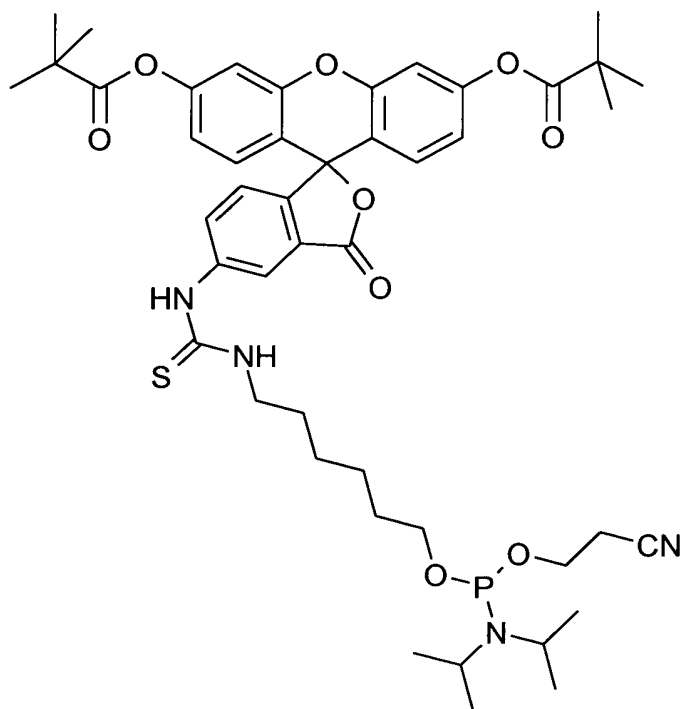
Fig. 4a:



Phosphorylating reagent 1



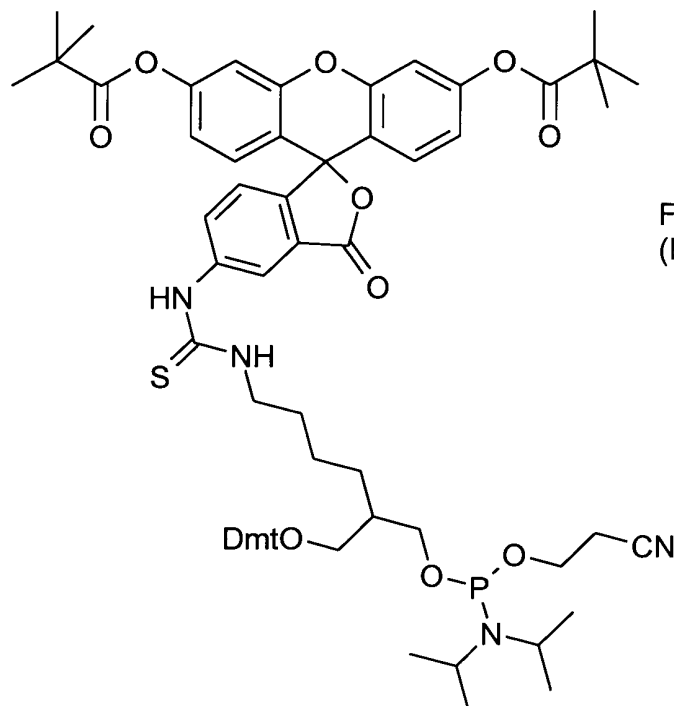
Phosphorylating reagent 2



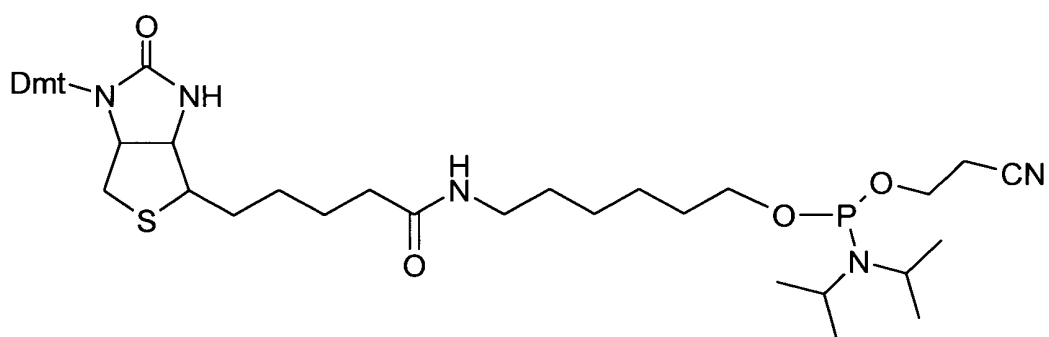
Fluorescein phosphoramidite 3  
(monofunctional)

FIG. 4a

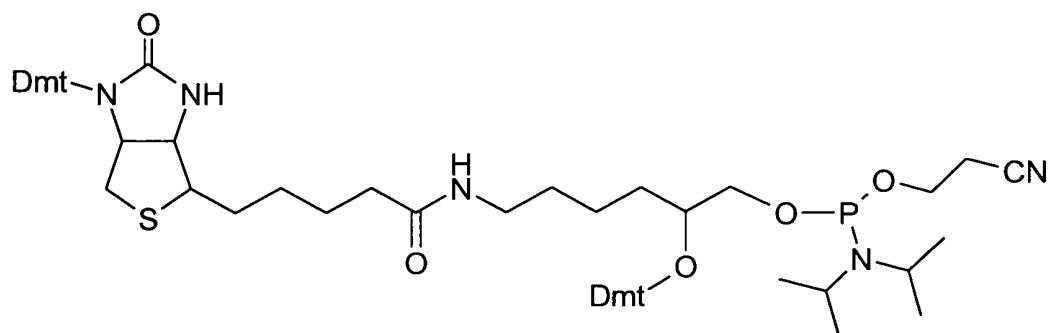
Fig. 4b:



Fluorescein phosphoramidit 4  
(bifunctional)



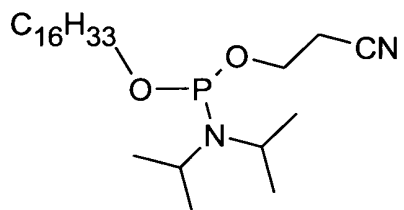
**Biotin phosphoramidit 5 (monofunctional)**



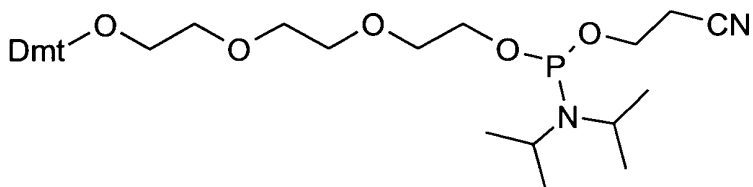
Biotin phosphoramidit 6 (bifunctional)



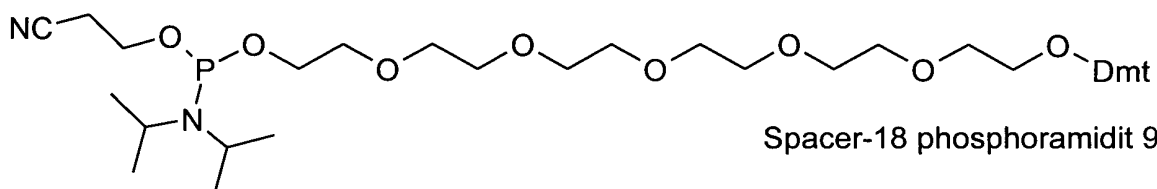
Fig. 4c:



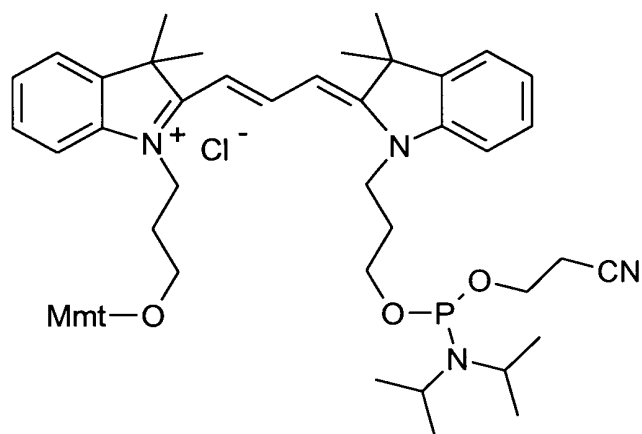
C16-phosphorylating reagent 7



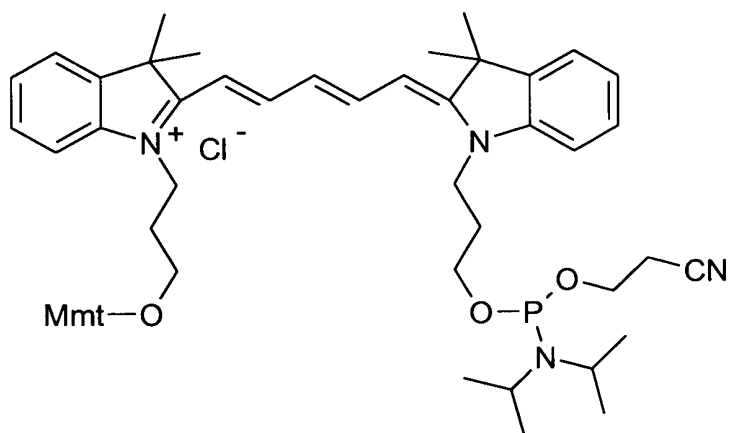
Spacer-9 phosphoramidite 8



Spacer-18 phosphoramidite 9



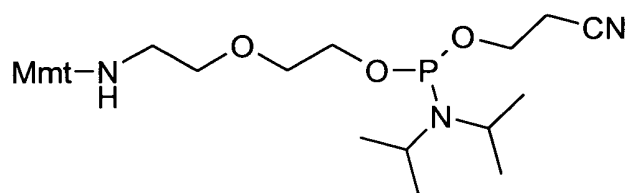
Cyanin-3 phosphoramidite 10



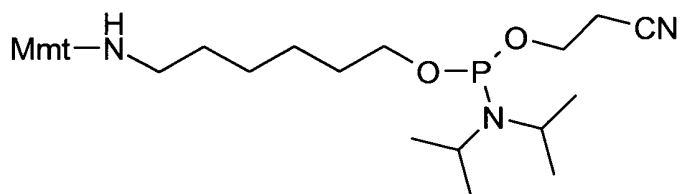
Cyanin-5 phosphoramidite 11

TOC-110-125860

Fig. 4d:



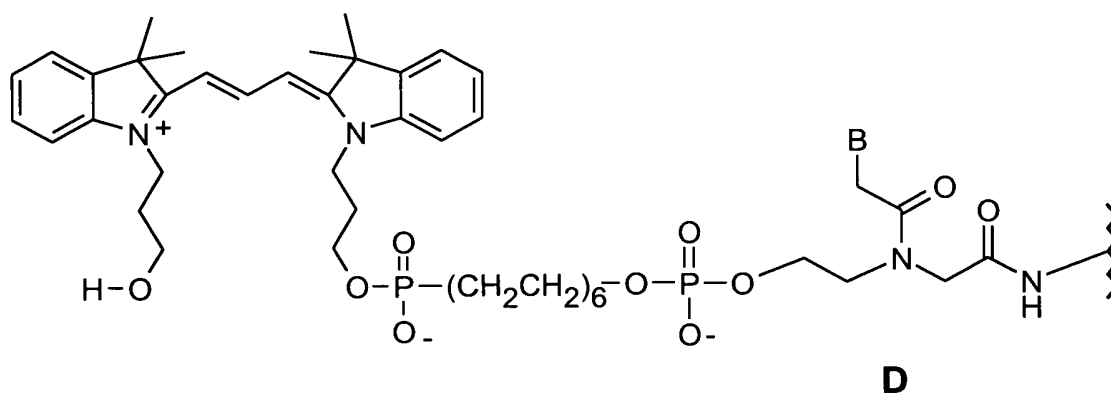
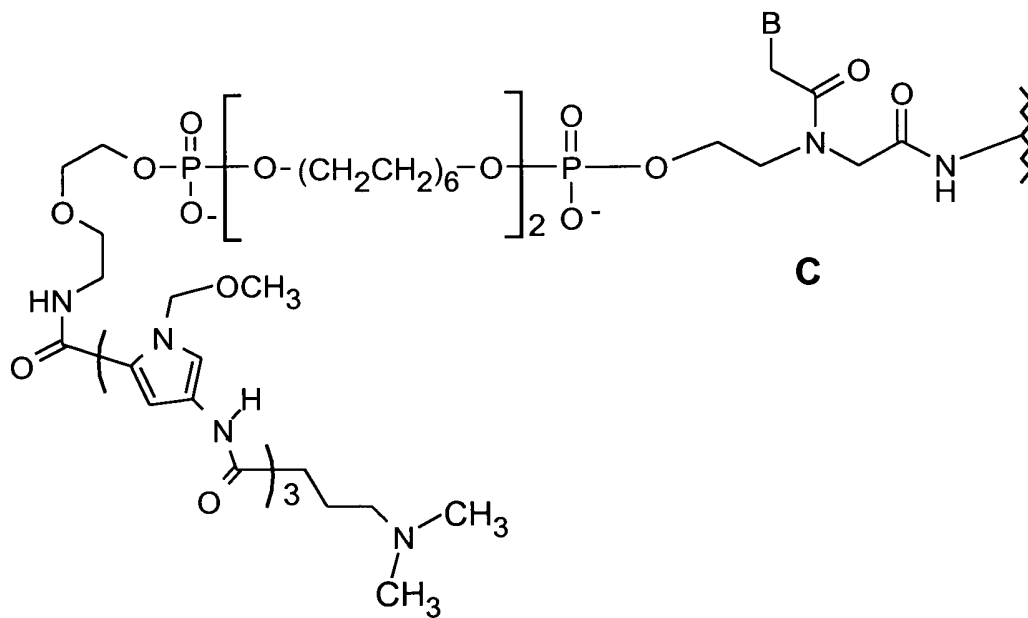
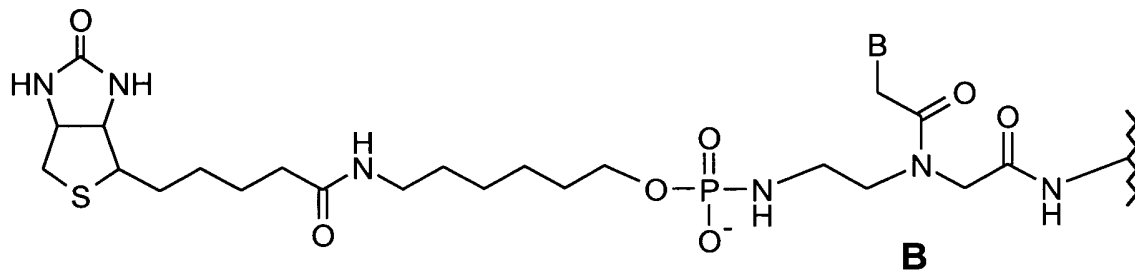
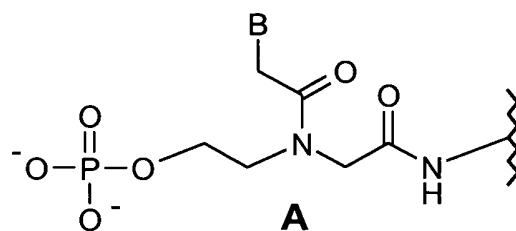
Aminomodifier-5  
phosphoramidite 12



Aminomodifier-C6  
phosphoramidite 13

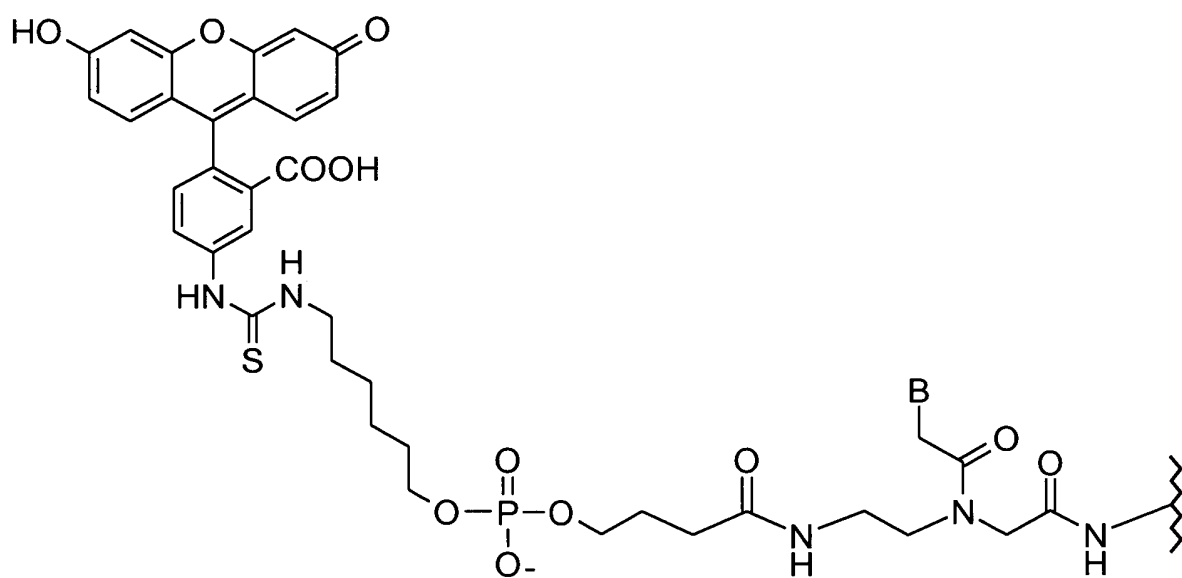
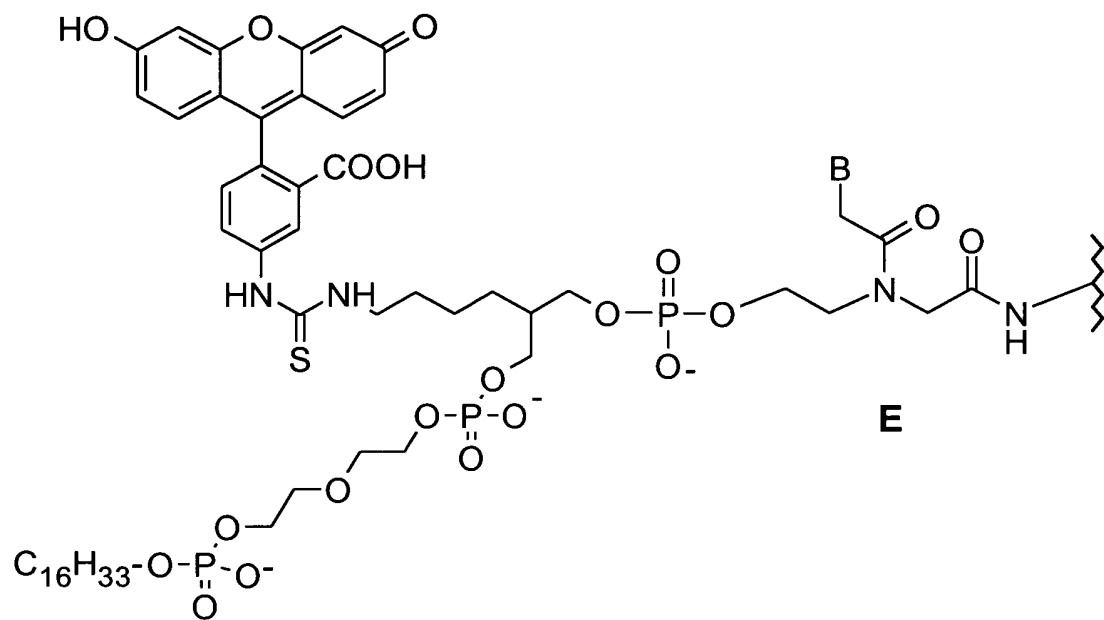
102470-169660

Fig. 5a:



102740-129860

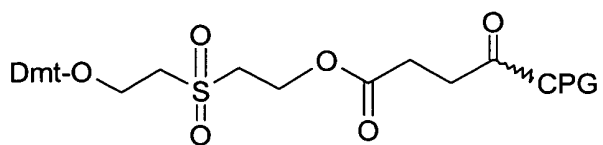
Fig. 5b:



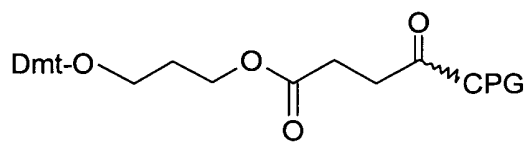
F

TOZT04-04360

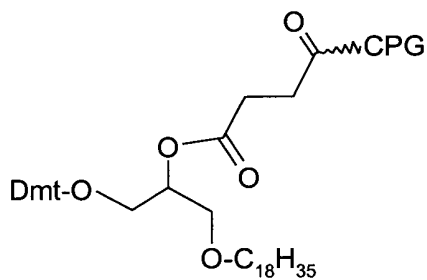
Fig. 6:



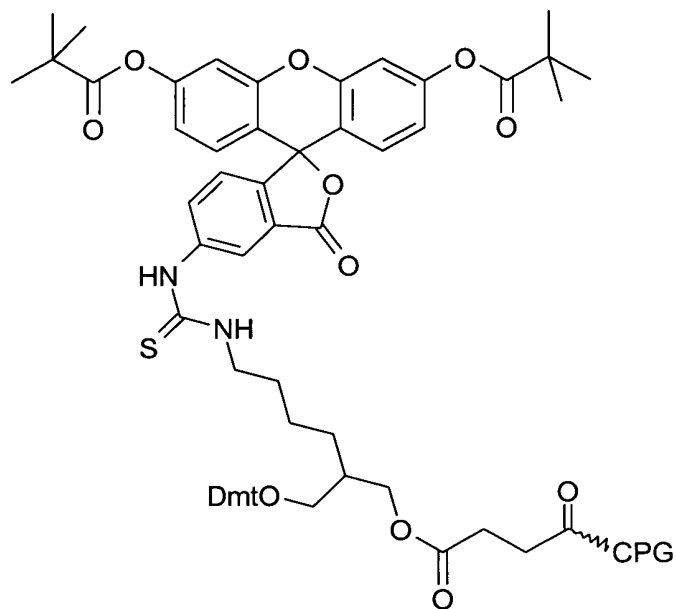
Bishydroxyethylsulfonyl support 1



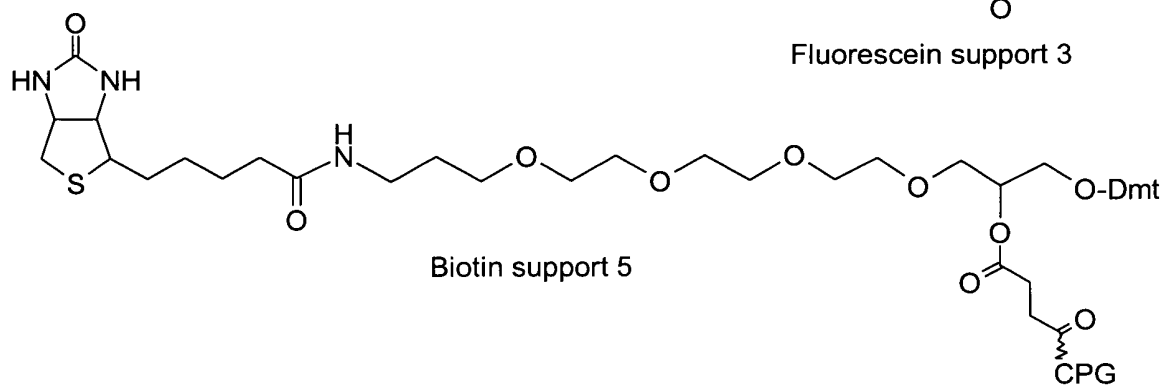
3'-Spacer-C3 support 2



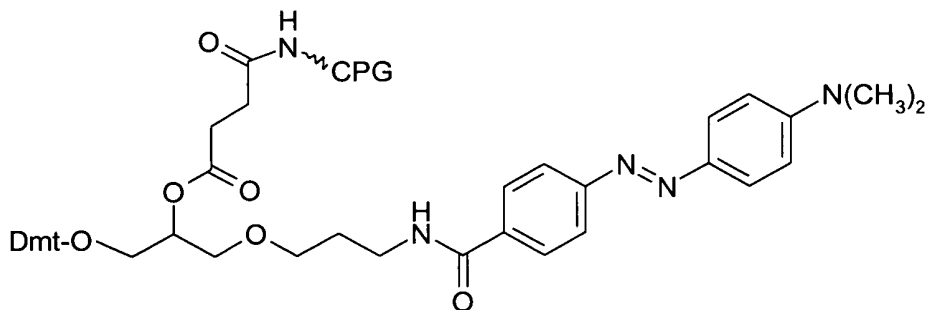
3'-Batyl support 4



Fluorescein support 3

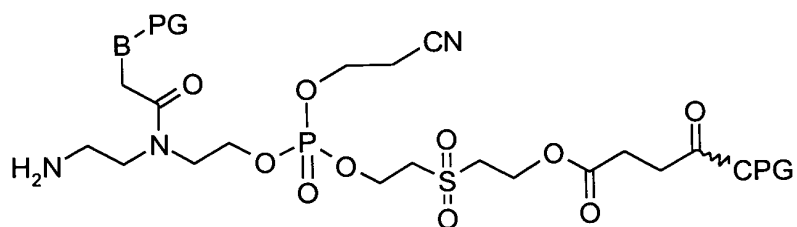
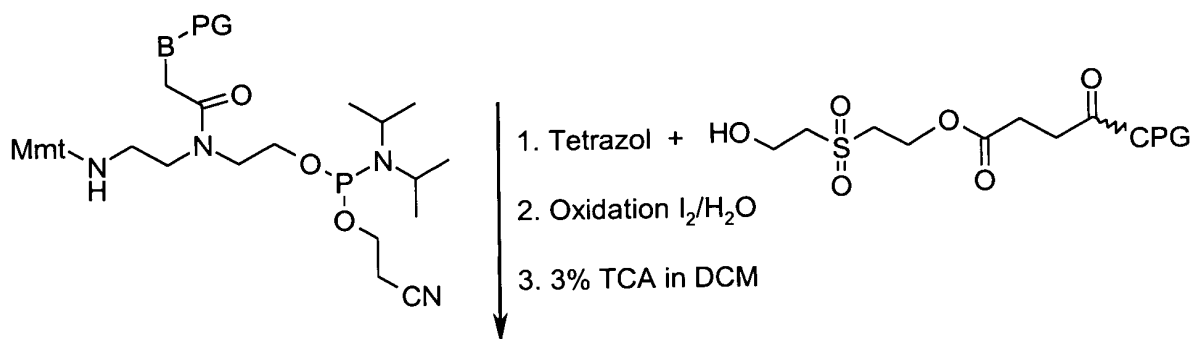


Biotin support 5

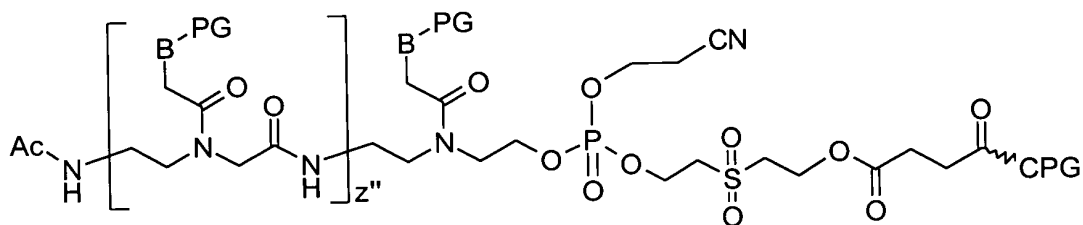


DABCYL support 6

FOR THE T252860



## PNA synthesis



conc. ammonia

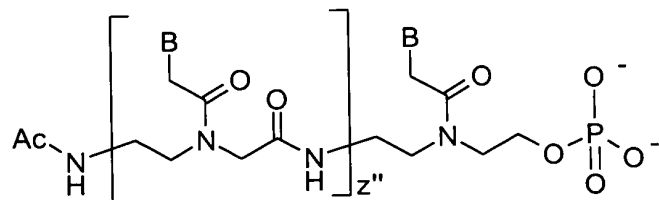
[illegible]

Fig. 8:

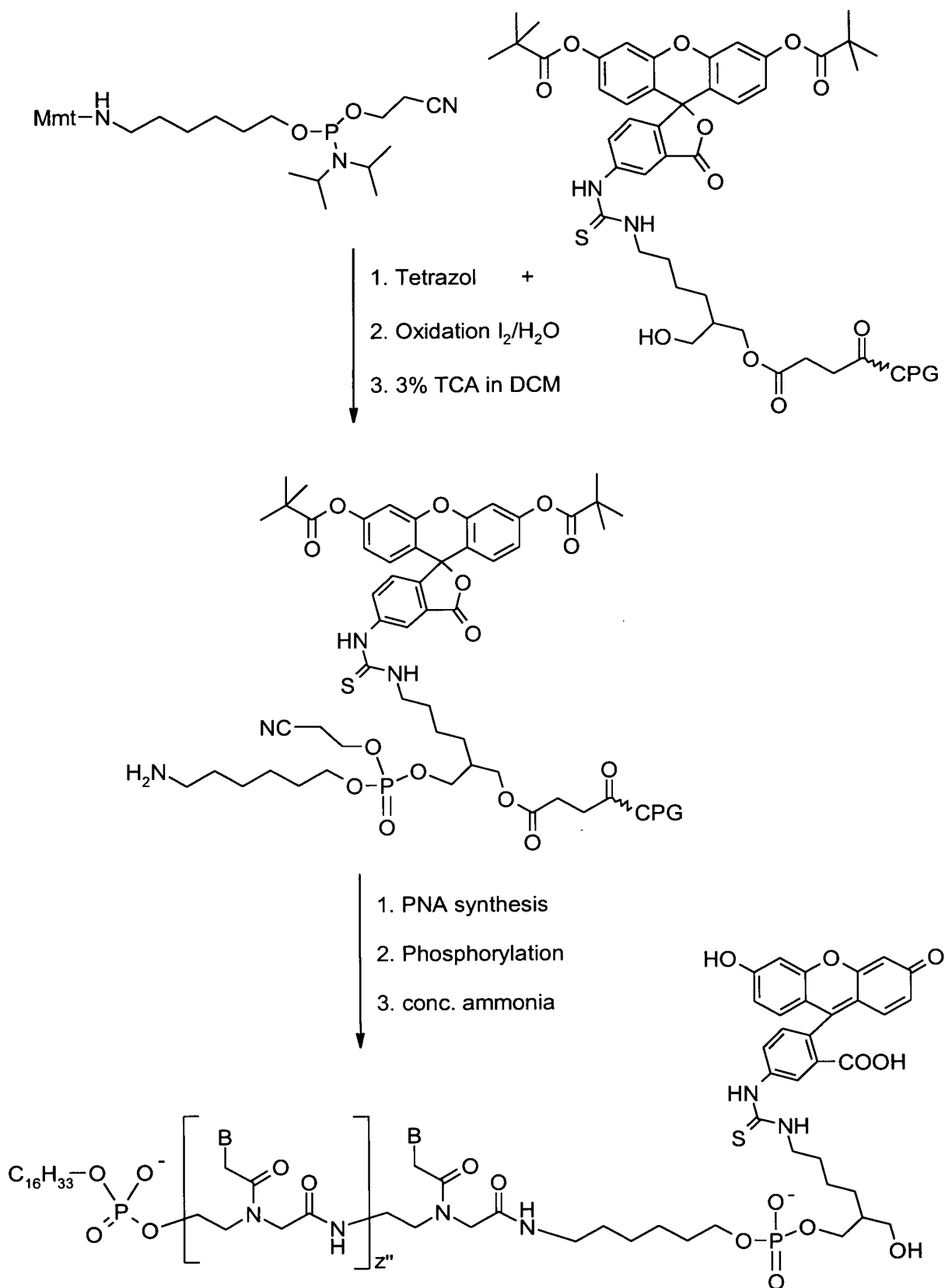
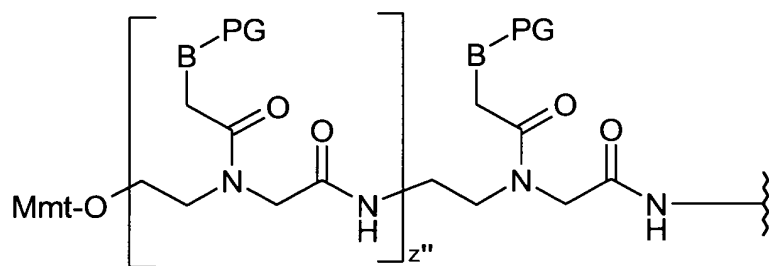
[illegible]

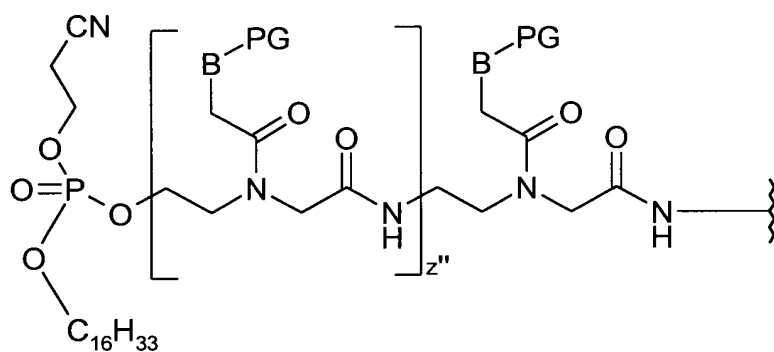
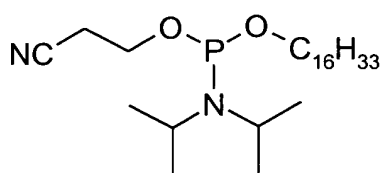
Fig. 9:



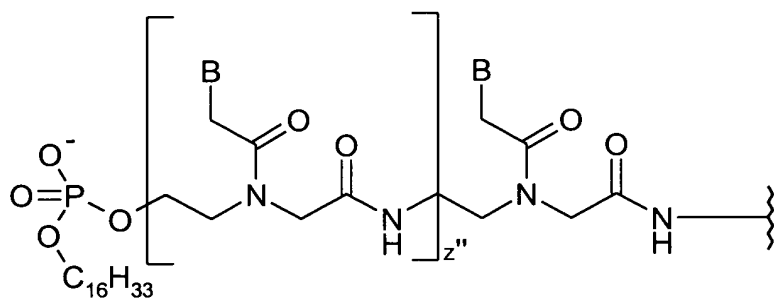
1. 3% TCA in DCM

2. Tetrazol +

3. Oxidation  $I_2/H_2O$



$NH_4OH$



1.04140-1.259360